common information for navigation of at least one flying object

existing as a navigation object, said base station transmitting to

said flying object necessary data from said stored information for

determining a course of action to be taken by said flying object,

on the basis of observation data from meteorological observation

means for observing the meteorology of a space region in which said

flying object is flying, said base station transmitting said

necessary data by using communication means connected to said

flying object,

wherein said base station has a memory for storing data sets

comprising:

all observation data obtained in the past through observation

by said meteorological observation means;

records of courses of action taken by said flying object on

the basis of the observation data; and

records of events encountered by said flying object as a

result of the records of the courses of action.

2.   (Once Amended) The flying object navigation system according

to claim 1, wherein

said flying object, having said meteorological observation

means, further includes:

transmitting means for transmitting, to said base station,

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observation data obtained through observation by said meteorological observation means; and

receiving means for receiving necessary data for determining a course of action to be taken, the necessary data being transmitted from said base station by using said communication means.

3.   CANCELLED

4.   (Once Amended) The flying object navigation system according to claim 1, wherein said base station inlcudes a data base which is constructed on the basis of the contents of said data sets stored in said memory and wherein observation data obtained through observation by said meteorological observation means, a course of action taken by said flying object after meteorological observation, and an event encountered by said flying object as a result of taking the course of action are related to each other.

5.   (Once Amended) The flying object navigation system according to claim 4, wherein said base station comprises:

a receiving section for receiving, through said communication means, observation data obtained through observation by said meteorological observation means;

a prediction section for predicting the relationship between a course of action taken by said flying object and an event encountered by said flying object as a result of taking the course of action by making a search to ascertain which case in said data base the received observation data corresponds to; and

a transmitting section for transmitting a prediction result obtained by said prediction section to said flying object through said communication means.

6.   (Once Amended) The flying object navigation system according to claim 5, wherein said base station has a function of successively storing, when data sets are newly formed, the new data sets on said memory, and a function of reconstructing said data base from the older data sets and the new data sets successively stored.

7.   (Once Amended) A flying object navigation system comprising:

a base station capable of storing information provided as common information for navigation of at least one flying object existing as a navigation object, said base station transmitting to said flying object necessary data from said information for determining a course of action to be taken by said flying object, on the basis of observation data from meteorological observation

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means for observing the meteorology of a space region in which said flying object is flying, said base station transmitting said necessary data by using communication means connected to said flying object, and

wherein said base station transmits a signal for operating said flying object to control the operation of said flying object.

8. (Once Amended) The flying object navigation system according to claim 1, wherein said system is provided on each of a plurality of different stars, and said base station that is respectively provided on the stars are connected by base station interconnection communication means.

9. (Once Amended) The flying object navigation system according to claim 1, wherein said system is provided on each of a plurality of different stars, a central base station is provided among the plurality of stars, and said base station that is respectively provided on the stars are connected to each other through said central base station.

10. (Once Amended) The flying object navigation system according to claim 1, wherein a plurality of base stations are provided on one star.

11. (Once Amended) The flying object navigation system according to claim 10, wherein the plurality of said base stations provided on each star are connected to each other through base station interconnection communication means, and wherein every time a data base is reconstructed, data sets and the data base are transmitted between said base stations.

12. (Once Amended) The flying object navigation system according to claim 1, wherein said base station and said flying object has an antenna, and each of said communication means and said base station interconnection communication means performs wireless communication.

13. (Once Amended) The flying object navigation system according to claim 1, wherein said flying object is an airplane.

14. (Once Amended) The flying object navigation system according to claim 1, wherein said meteorological observation means comprises an air turbulence observation apparatus.

15. (Once Amended) The flying object navigation system according to claim 1, wherein an event encountered by said flying object includes changes in wind velocity with time in vertical and/or

horizontal directions acting on said flying object.

16. (Once Amended) The flying object navigation system according to claim 12, wherein said communication means for performing wireless communication uses light waves.

17. (Once Amended) The flying object navigation system according to claim 12, wherein a plurality of base stations are provided on one star and are connected by a base station interconnection cable.

18. (Once Amended) The flying object navigation system according to claim 17, wherein said base station interconnection cable is formed of an optical fiber cable.

19. (Once Amended) The flying object navigation system according to claim 14, wherein said air turbulence detector comprises a laser radar air turbulence detector.

20. (Once Amended) The flying object navigation system according to claim 19, wherein said laser radar air turbulence detector has functions of transmitting laser light, receiving, as a received signal, scattered light caused by scattering of the laser light in the air, and observing the wind velocity from the Doppler effect

in the received signal.

21. (Once Amended) The flying object navigation system according to claim 19, wherein said laser radar air turbulence detector has functions of transmitting laser light, receiving, as a received signal, scattered light caused by scattering of the laserlight in the air, and observing the density of air from the intensity of the received signal.

22. (Once Amended) A flying object navigation system comprising:

at least one flying object existing as a navigation object;

meteorological observation means for observing the meteorology of a space region in which said flying object is flying; and

flying object interconnection means for interconnecting a plurality of said flying objects,

wherein information provided as common information for navigation of said flying objects is stored in each of said flying objects, and a course of action to be taken by each of said flying objects is determined on the basis of said information and observation data from said meteorological observation means.

23. (Once Amended) The flying object navigation system according

to claim 22, wherein said meteorological observation means is mounted on said flying object.

24. (Once Amended) The flying object navigation system according to claim 23, wherein said flying object has a memory for storing:

data sets constituted of all observation data obtained in the past through observation by said meteorological observation means mounted on said at least one flying object;

records of courses of action taken by said flying object on the basis of the observation data; and

records of events encountered by said flying object as a result of the records of the courses of action.

25. (Once Amended) The flying object navigation system according to claim 24, wherein said flying object further comprises:

a data base which is constructed on the basis of the contents of said data sets stored on said memory, and wherein observation data obtained through observation by said meteorological observation means, a course of action taken by said flying object after meteorological observation, and an event encountered by said flying object as a result of taking the course of action are related to each other.

26. (Once Amended) The flying object navigation system according

to claim 25, wherein said flying object further comprises:

a prediction section for predicting the relationship between a course of action taken by said flying object and an event encountered by said flying object as a result of taking the course of action by making a search to ascertain which case in said data base the received observation data obtained through observation by said meteorological observation means corresponds to; and

a transmitting section for transmitting a prediction result obtained by said prediction section to another flying object through said flying object interconnection communication means.

27. (Once Amended) The flying object navigation system according to claim 26, wherein said flying object includes a function of successively storing on said memory data sets, each of said memory data sets comprising:

observation data obtained through observation by said meteorological observation means mounted on said flying object or another flying object;

a record of a course of action taken by said flying object or the other flying object on the basis of the observation data;

an event actually encountered by said flying object or the other flying object as a result of the record of the course of action; and

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a function of reconstructing said data base from updated data sets obtained by combining the older data sets and the new data sets successively stored.

28. (Once Amended) The flying object navigation system according to claim 22, wherein said system is provided on each of a plurality of different stars, and said flying objects, flying respectively near the stars, are connected by said flying object interconnection communication means.

29. (Once Amended) The flying object navigation system according to claim 22, wherein said system is provided on each of a plurality of different stars, wherein a central base station is provided among the plurality of stars, and wherein said flying objects flying respectively near the stars are connected to each other through said central base station.

30. (Once Amended) The flying object navigation system according to claim 22, wherein said flying object has an antenna, and said flying object interconnection communication means performs wireless communication.

31. (Once Amended) The flying object navigation system according

to claim 22, wherein said flying object is an airplane.

32. (Once Amended) The flying object navigation system according to claim 22, wherein said meteorological observation means comprises an air turbulence observation apparatus.

33. (Once Amended) The flying object navigation system according to claim 32, wherein an event encountered by said flying object includes changes in wind velocity with time in vertical and horizontal directions acting on said flying object.

34. (Once Amended) The flying object navigation system according to claim 32, wherein said flying object interconnection communication means for performing wireless communication uses light waves.

35. (Once Amended) The flying object navigation system according to claim 32, wherein said air turbulence detector comprises a laser radar air turbulence detector.

36. (Once Amended) The flying object navigation system according to claim 35, wherein said laser radar air turbulence detector has functions of transmitting laser light, receiving, as a received

signal, scattered light caused by scattering of the laser light in the air, and observing the wind velocity from the Doppler effect in the received signal.

37. (Once Amended) The flying object navigation system according to claim 35, wherein said laser radar air turbulence detector has functions of transmitting laser light, receiving, as a received signal, scattered light caused by scattering of the laser light in the air, and observing the density of air from the intensity of the received signal.

Please add the following claims:

38. (NEW) A flying object navigation and prediction system comprising:

an observation apparatus mounted on a flying object for collecting and transmitting observation data; and

a database terminal for receiving said observation data, determining and transmitting prediction results to said flying object for determining a flight path for said flying object based on said prediction results,

wherein observation data is received by said database terminal from a plurality of flying objects, and

wherein said database terminal determines said prediction

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results based on received observation data and prior observation data from said plurality of flying objects, said observation data received from said plurality of flying objects being categorized in said database terminal according to occurred events in similar trajectories and spatial positions.

39. (NEW) The flying object navigation and prediction system according to claim 38, wherein said observation data includes meteorological data.

40. (NEW) A flying object navigation and prediction system comprising:

an observation apparatus mounted on at least one flying object for collecting and transmitting observation data; and

a database terminal mounted on a second flying object for receiving said observation data, determining and transmitting prediction results for determining a flight path for said second flying object based on said prediction results,

wherein said database terminal determines said prediction results based on received observation data and prior observation data from said at least one flying object, said observation data being categorized in said database terminal according to occurred events in similar trajectories and spatial positions.

41. (NEW) The flying object navigation and prediction system according to claim 40, wherein said observation data includes meteorological data.